

FUNCTION INJECTOR

ABSTRACT OF THE DISCLOSURE

5 An original function or method in a machine-readable software component, such as a function in an executable file, is instrumented regardless of whether the function is embedded within the machine-readable software component or an imported function residing in another DLL. When a call to an original function is instrumented, the entry point of the function and the identity of the function are stored in the machine-readable software component. A function lookup table is used for storing the identity and location of the original function.

10 Storing the information enables a user-supplied function, that is called in substitute for the original function, to retrieve or lookup the location of the original function, using the name of the original function as a key, and then call the original function. As a result, the user-supplied function acts as a wrapper of the original function and enables fault simulation code to control the execution of the original function. STUB for imported function

15 Furthermore, a master lookup table that is created at initialization of an injector runtime library, identifies the location of the function lookup table using the base address of the instrumented executable file. This enables the function lookup table for each instrumented executable file to be located, and then searched to identify the location of an instrumented function with the instrumented executable file.

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